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# KNOWLEDGE SHARING BARRIERS AT THE INDIVIDUAL LEVEL IN A CHINESE BANK

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# KNOWLEDGE SHARING BARRIERS AT THE INDIVIDUAL LEVEL IN A CHINESE BANK

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## Abstract

*A considerable amount of research has focused on knowledge sharing practices, including enablers and barriers, and it is generally agreed that it can contribute to organisational success. However, we know little about how these barriers are formed in organisational contexts and whether they can be overcome. In this research, we conducted a qualitative investigation in one branch of a major bank in China, considering the barriers that may prevent knowledge sharing activities from occurring, as well as ways to overcome them. We found that there is only one significant barrier, the potential loss of knowledge power, which can be overcome by system adjustment. The implications of the research for future research and practice are discussed.*

*Keywords: knowledge sharing, loss of knowledge power, relationship orientation, face.*

## 1 INTRODUCTION

In order to develop and maintain a competitive advantage, it is important for organisations both to develop and to apply appropriate knowledge resources. Prior research indicates that knowledge sharing could facilitate the knowledge creation process (Nonaka, 1994) and help an organisation to retain its competitive advantage (Kearns & Lederer, 2003). It has also been proposed that knowledge sharing between employees in organizations has potential impacts on process efficiency enhancement (Cummings, 2004). However, it is not easy to motivate knowledge sharing behaviors because knowledge typically resides tacitly in employees' heads. Moreover, knowledge sharing behavior can only be encouraged, not forced, since knowledge hoarding is seen as a characteristic of human beings (Davenport and Prusak, 1998).

Much research has been conducted to indicate how employees can be persuaded and facilitated to engage in knowledge sharing behavior. Results from this research show that there are many activities which could be undertaken to encourage knowledge sharing, including building a knowledge sharing culture, using IT, and getting managers' support. However, while all these activities are designed to create an appropriate atmosphere where employees can share, knowledge sharing behavior itself is still dependent on knowledge contributors, and so whether they actually want to share is a more important issue. Consequently, the activities indicated above may not work in situations where employees resist knowledge sharing because of their hostility towards the behavior (Husted & Michailova, 2002).

Although the barriers that prevent knowledge sharing activities in organisations have been identified, little research has been conducted on how to overcome these barriers and even less research has focused on the extent to which these barriers are a significant threat to knowledge sharing, let alone how to reduce their impact. Investigating these issues in a real organisation could help us to understand how knowledge sharing actually takes place and would facilitate our understanding of how barriers come into being. Yin (2003) suggests that the case study method is appropriate for investigating an existing phenomenon like this in a real context. Thus, we chose to conduct a case in a Chinese organization with the aim of developing a deeper understanding of how knowledge sharing is prevented, and whether there is an effective and feasible method to overcome the barriers.

Following this short introduction, we propose several research questions which will direct this study. These questions have not been addressed previously, but we believe that they are relevant to the current organisational context of encouraging knowledge sharing behavior. Past research demonstrates that benefits could also be gained as well as cost which would cause barrier. This means that knowledge sharing behavior might cause both negative and positive outcomes for the knowledge contributor. However, in the real world, how do these factors interrelate and so contribute to the actual sharing of knowledge? The following research issues were identified as being worthy of investigation.

1. Past research has shown that loss of knowledge power is a critical factor that may hinder knowledge sharing. Employees may perceive that they could benefit more if they keep knowledge to themselves. Several solutions have been proposed including “restructuring the pay-off structure”, “increasing people’s perception of efficiency” and “fostering cooperation” (Cabrera & Cabrera, 2002). However, these propositions have never been tested in a real context, and hence their feasibility is unknown.
2. Huang et al. (2008) found that face has multiple impacts on knowledge sharing. Although fear of losing face might be a barrier, the intention to gain face could encourage employees to share their knowledge so as to gain recognition from their colleagues and supervisors. How do these two functions work together and do they lead to sharing behavior or not?
3. Past research indicates that although Chinese employees are still likely to share knowledge because of collectivism, they are more inclined to share on an in-group basis rather than with out-group members (Chow, Deng, & Ho, 2000). However, the boundary of the group has never been explained clearly. If the boundary is not clear, then the meaning of in-group and out-group differences in knowledge sharing is at best questionable.

In this paper, we aim to address these issues through a case conducted in China. Overall, we expect that this study will contribute to both the theory and practice of knowledge sharing in the Chinese context, in addition taking Chinese cultural factors into consideration. In the next section, we will review the relevant literature. Next we introduce our propositions. Finally, we will offer a discussion and implications.

## **2 THEORETICAL FOUNDATIONS AND ASSUMPTIONS**

### **2.1 Knowledge sharing barriers**

Recent research on knowledge sharing has suggested the existence of many different barriers to effective sharing. Kankanhalli, Tan and Wei (2005) divided the antecedents of contributing knowledge into costs and benefits. They suggested that codification effort and loss of knowledge power are the costs that prevent knowledge sharing from happening. Husted and Michailova (2002) analysed how to overcome employees’ hostility towards knowledge sharing. They propose that knowledge sharing hostility could be demonstrated through behaviors and attitudes towards knowledge sharing. They also listed several factors which they suggest will lead to knowledge hoarding: 1) loss of knowledge power; 2) reluctance to spend time on knowledge sharing; 3) fear of free riding; 4) avoidance of exposure because of insufficient confidence in the knowledge; 5) strategy against uncertainty which means knowledge contributors worry about the misuse of the knowledge they share; 6) high respect for hierarchy and formal power. Ardichvili, Page and Wentling (2003) conducted a qualitative case study to investigate knowledge contributions in virtual communities. Their findings suggest that knowledge hoarding is not a primary problem, since less than 10% of employees will hoard their knowledge because they regard their knowledge as their asset and competitive advantage. The main reason they do not want to share is “fear of losing face”. They are afraid that what they contribute is not needed or not important and may even mislead others. Cabrera and Cabrera (2002) employ the idea of social dilemma to illustrate that employees won’t share their knowledge because individual rationality (intention to maximize personal interest) will finally lead to collective irrationality. This implies that

the effort in sharing knowledge could not be compensated enough since employees will lose both their knowledge power and their time and effort needed to contribute.

Besides the barriers mentioned above, researchers also find that knowledge sharing barriers may be related to cultural factors. In the Chinese context, past research shows several potential barriers caused by cultural factors.

1) In-group and out-group orientation. Chow, Deng and Ho (2000) propose that although knowledge sharing is easier to facilitate in Chinese organizations because of high collectivism, Chinese employees might have a significantly different attitude towards people from the out-group and the in-group. For instance, they are likely to have a hostile attitude towards out-group members and intend not to share knowledge with them.

2) Fear of losing face. It has been found that the issue of face has multiple effects on knowledge sharing behavior. People who intend to gain face will be inclined to share their knowledge while those who are afraid of losing face will be inclined to resist sharing knowledge with others (Huang et al., 2008). The issue of face has even been found in the online knowledge sharing context, where Ardichvili et al. (2003) indicated that face concern is the main barrier to knowledge sharing.

3) Furthermore, relationship orientation is a cultural character which has been found to have a significant impact on the intention to share knowledge (Huang et al., 2008). It has also been indicated that anticipated reciprocal relationship has a positive impact on attitude towards knowledge sharing which further impacts intentions to share knowledge (Bock, Zmud, Kim, & Lee, 2005).

## **2.2 Loss of knowledge power**

Loss of knowledge power has been regarded as a critical barrier to knowledge sharing. It has been proposed that after employees' contribute unique knowledge, they then "give up sole claim to the benefits stemming from that knowledge" (Gray, 2001). Employees might therefore choose to keep knowledge to themselves and refuse to share if they think knowledge hoarding could benefit them.

However, researchers are divided on the issue of loss of knowledge power. Kankanhalli et al. (2005) hypothesised that loss of knowledge power would prevent employees from contributing knowledge, but the hypothesis was not supported. Two possible explanations for this are: 1) the knowledge contributor could choose freely to contribute the knowledge they would like to share and will not be afraid that their contribution could threaten their status in organizations; 2) survey respondents might be those who would like to participate in knowledge contributing activities. In our own previous work, we found that loss of knowledge power has a significantly negative impact on the attitudes towards knowledge sharing which further affected knowledge sharing intention. However, we did not go further and study actual knowledge sharing behaviors.

In the current study, we intend to establish whether loss of knowledge power could be a barrier in knowledge sharing activity and if there is an effective way to overcome it. Based on the past research, we assumed that:

Proposition 1: Perceived loss of knowledge power will prevent employees from sharing their knowledge.

## **2.3 In-group and out-group orientation**

Collectivism and individualism are frequently topics of knowledge sharing research focus and it has been confirmed that employees from collectivistic cultures are more inclined to share their knowledge with others than employees from individualistic cultures (Chow et al., 2000; Michailova & Hutchings, 2006). However, it is also proposed that inclination to share knowledge due to collectivism is limited to the group level. That is to say, Chinese employees have significantly different attitudes to in-group and out-group members which shows that collectivism does have certain boundaries. This in-group/out-group distinction thus makes multiple impacts on knowledge sharing in organizations and

illustrates that knowledge sharing within a group would occur more easily while knowledge sharing between groups would be more difficult to facilitate (Voelpel & Han, 2005).

However, two further issues demand attention. Firstly, we need to consider the criterion of the in-group and out-group boundaries. Research shows that there is no common agreement on what the term 'in-group' means. Chow et al. (2000) regard the in-group relationship as involving people who have worked together. Voelpel and Han (2005) think the boundary can be determined according to whether people are in the same department or division. The other issue is whether the knowledge shared would cause damage to the contributor or the group. This concept has much to do with the loss of knowledge power. However, the loss of knowledge power has always been measured at the individual level. Could it also be a group level construct given the collectivistic tendency and so could knowledge be beneficial for the whole group? In this research, we will investigate these two questions to identify any differences between in-group and out-group members. We assumed that

Proposition 2: Employees would like to share their knowledge with their in-group colleagues more than with their out-group colleagues

## **2.4 Face**

"'Face' is the respect, pride and dignity of an individual as a consequence of his/her social achievement and the practice of it" (Leung & Chan, 2003). Face is a more salient topic in Chinese society in the context of social interactions compared to Western societies (Ting-Toomey, 1988). The resources which constitute face could be of many kinds: the wealth you gain, the ability you have, the achievement you have made, and the relationships you have been involved in. Although face is not a phenomenon restricted to China, Chinese people do care for the issue of face so much that even cultural atmosphere and agreement has been formed so as to protect people's face during social interactions. People will try to gain face when they are in an advantageous position and try to avoid losing face when they are in a disadvantageous position.

Face has also been studied in the knowledge sharing context. It has been proposed that Chinese employees are reluctant to share knowledge in public for fear of losing face. Research also shows that employees are eager to share their knowledge to win recognition and face because sharing their useful knowledge could enable their colleagues to appreciate their knowledge and ability. However, research also shows that actually Chinese people's fear of losing face will not affect their knowledge sharing activities (Ardichvili, Maurer, Li, Wentling, & Stuedemann, 2006). These employees show that they are not afraid of losing face to ask questions which might demonstrate their ignorance. Knowledge sharing activities could be induced by asking questions, but it will be far better if employees share knowledge on their own initiative. Whether the face issue will have any impact on taking the initiative to share knowledge is still a problem worthwhile to study in a real context. We assumed that,

Proposition 3: Face is an important concern when sharing knowledge with others.

## **2.5 Relationship orientation**

Relationship orientation has been classified as one of the most important social orientations in research focused on Chinese social activities (Yang, 2005). It shows that a relationship has already been deemed as a fundamental basis for people's interaction with others. Yang (2005) demonstrated the characteristics of this orientation in his research, proposing that people will treat others differently based on different relationships with others. In general, Chinese people are concerned with maintaining a harmonious situation and hence they will be inclined to maintain a good relationship with people around them. Relationship is also regarded as an extremely important resource to both individuals and organizations (Xin & Pearce, 1996; Zuo, 2002).

As a typical social activity, knowledge sharing has been studied in combination with relationships and social networks. Granovetter (1973) demonstrated that weak ties are more helpful for knowledge sharing to take place because unfamiliar persons could bring novel information and new ideas.

However, more recent research indicates that good relationships could facilitate knowledge sharing activities because employees with good relationships can trust one another more easily (Ramasamy, Goh, & Yeung, 2006), and are more inclined to conduct the citizenship behavior of helping others (Huang, Davison, Liu, & Gu, 2006). Marouf (2007) even divided relationships into two categories - business and social - and found that business relationships contribute more to sharing knowledge in organizations. This is quite reasonable since the object of knowledge sharing is to enhance working efficiency. However, whether social relationships can be clearly differentiated from business relationships is questionable, especially in the Chinese context where all relationships tend to highlight emotion ingredients (Chen & Chen, 2004). In this study, we try to investigate how relationship orientation could facilitate knowledge sharing and we assumed that,

Proposition 4: Relationship orientation has a positive impact on knowledge sharing behavior.

### **3 RESEARCH CONTEXT AND METHODOLOGY**

The bank where we conducted the case is one of the largest banks in China. It has altogether more than 15,000 domestic branches and about 100 overseas branches. It provides a wide range of financial products and services to over 2 million corporate banking customers and 170 million personal banking customers. The branch where we chose to conduct the case is located in a central-eastern city in China.

In our initial observations of work practices at the bank, we discovered that knowledge sharing would take place in two different ways: offline communication between employees and online knowledge contributing. No formal records were kept of the offline sharing, but log files of online sharing existed and could be viewed. Given this situation, we decided that it would be most appropriate to employ a qualitative research method based on interviews with employees.

There are altogether 52 employees in the branch including management and operation level staff. The number of operation level staff is about 25. Their primary task is to sit at the counter and do the routine work when customers come to the bank for general business, such as making deposits and withdrawals. Employees from the management level will conduct more complex work where tacit knowledge is more important. Thus, we decided only to interview employees from the management level. There are four departments in the branch: Marketing, Administration, General Management and Sales. We interviewed the director of each department, as well as two experienced employees from the General Management and Marketing departments and one experienced employee from the Sales department.

All the interviews were conducted face-to-face in Chinese and each interview lasted 30 to 80 minutes. Afterwards, additional phone calls were made to supplement the missing content during the interviews. A total of 9 persons including 4 directors and 5 employees participated and gave detailed answers to our open-ended questions. All of the interviewees (7 males and 2 females) are active and experienced employees in the branch, with ages ranging from 29 to 49. Most of them have worked in the bank for more than 5 years. Their answers enable us to understand clearly the conditions of knowledge sharing in a real working context. All interviews were taped and then transcribed in Chinese. Data was coded according to the process proposed by Miles and Huberman (1994), including data reduction, data display, conclusion drawing and verification. First, we deleted the information unrelated to our research topic and selected useful and related information. This process made us concentrate on the meaningful information instead of being distracted and misled by other information. Second, we did data display mainly in the word form. Categories were identified based on the different barriers to knowledge sharing that we intended to investigate. At the same time, each interviewee's answer was categorized in order to have a clear version to do the preparations for the conclusions drawing. Finally, data were analyzed and results were concluded using the strategies proposed by Yin (2003). The questions we asked are listed in the Appendix.

## 4 FINDINGS

### 4.1 Loss of knowledge power

The study shows that almost all the employees of the bank will not refuse to share their knowledge, except for the employees from the Marketing department. In other departments, such as Sales and General Management, employees have a strong intention to share knowledge. This was quite an unexpected finding, and is illustrated by comments made by three employees. For instance, one employee from the Sales department indicated that:

*“I will share all my experience with them. Once you share it, two obvious benefits can be obtained: first, they could operate their own business in standardization which is good for venture control. Second, it will enhance their capability, once they could handle the business all by themselves. Moreover, they will stop asking me all kinds of questions.”*

The other employee from the Sales department said that:

*“I have never thought about keeping any knowledge to myself. On the contrary, I would like to share my knowledge with others very much. I don’t think it is correct to keep any knowledge secret. First, the group’s overall quality could not be enhanced which will damage the image of the enterprise. Second, if you keep the knowledge, this means that you have to take all the things and responsibility, it will be very tiring.”*

The employee from the General Management department said that:

*“I would like to teach them whatever I have. If they do not know what to do, they will all turn to me, and this will make me very busy. My energy is limited. I prefer to make them learn everything instead of keeping asking me questions. Sometimes, they even would shift off their own duty to me just because I know how to do it while they do not.”*

Given this attitude, we realised that knowledge sharing could reduce the workload of knowledgeable people while simultaneously enhancing overall efficiency. The two employees’ replies indicated that they care for the image of the department very much. We found the only department in which employees are reluctant to share knowledge is the Marketing department.

An employee from the Marketing department stated that:

*“I will not offer them the knowledge or any information about the customers we are dealing with. If they (employees from the Marketing department of other branch) ask, I will not mention the key content. In most cases, they know such topics are sensitive and we do not discuss it.”*

The same employee also said

*“Competition exists between the branches. Although knowledge sharing is requested by the directors, we will not tell them any useful information at all. The director of the branch will give a report to introduce his experience if that branch’s performance is good. But the experience is quite general and it cannot be used directly. Therefore, most of the knowledge sharing activities happen inside the branch, not between the branches”.*

The reason for the lack of knowledge sharing is quite obvious: there is competition between branches. For this reason, employees in the marketing department will not share key knowledge about the potential customers so as to ensure that they can achieve their own marketing targets as much as possible.

#### **4.2 Face**

Our findings indicate that face is not perceived by employees as an important antecedent of knowledge sharing. They seldom think about this issue during the process of knowledge sharing.

An employee from the Marketing department said:

*“No, we are all colleagues, so there is no relation to the issue of face. Honestly speaking, we are all employees not the boss, so who wants face from whom? I think face could be embodied when there are conflicts of interest, but since we are employees from the same level, nobody will think of the face with each other.”*

Even when they show lack of knowledge of some areas, they are not bothered by this.

An employee from the Sales department indicated that:

*“I would not feel embarrassed if I show lack of knowledge sometimes. People are not omnipotent and could not understand every thing. So that is why we need to keep learning.”*

From the nine interviewees, only one interviewee from the General Management department expressed the feeling of gaining face through knowledge sharing. Besides, he is the only person to show great passion for his work and enjoys learning new professional knowledge and sharing this knowledge, even though this will take up much of his spare time.

He is the director of general management department and he indicated that:

*“Being the director of the department, I feel I have the obligation to do some training for my subordinates. I will also give training to employees from other branches. Sometimes, people from other branches know that I am good at it and have much new knowledge that is helpful to their career through word or mouth, so they will invite me to go there and organize a training. After training people at those branches, the next time I am there again everybody knows me and treats me well. This is really a good feeling.”*

Others think that sharing knowledge is part of their duty. They do not feel that they could gain face through this activity.

#### **4.3 Relationship / out-group and in-group**

We found that relationships with colleagues are very useful for effective knowledge sharing and most employees admitted that the quality of the relationship has a strong impact on the quality of the knowledge to be shared. An employee from the Marketing department said:

*“Knowledge sharing might happen any time, any where. However, one of the premises is the good relationship between two persons. If the relationship is good enough, anything is possible. If the relationship is bad, everything is impossible. I think that in China relationship ranks top. If you have a good relationship, then everything will be smooth, otherwise, you will have much trouble.”*

The director of the Administration department said:

*“I am inclined to ask questions from those who have a good relationship with me. Although other people will not decline me and tell me the answer, people who have a good relationship with me will tell more detail and important tips which would save much effort and time. Other people just talk in general which I think is far from enough.”*



Besides colleagues in the same department, they also need to maintain the relationship with employees in other departments, even in other branches. Then, we could find that knowledge sharing does happen between the departments and the branches.

The director of the Sales department said:

*“Because one person could not be familiar with all types of the business of the bank, when you face difficulty, you could make a phone call to ask for help. For example, when some kind of bill of document is in short supply, you could easily borrow from them. So, I think having 2 or 3 friends in other branches is necessary to do the work”*

Thus, we can find that in this organization, in-group and out-group orientation is not a problem in knowledge sharing. Employees think that keeping a good relationship with people outside will facilitate the work because people outside will bring them new knowledge which they cannot get from the employee of the same department or same branch. Naturally, they admitted that the chances of sharing knowledge with people in other branches are much fewer than with employees in the same branch because of the distance. However, they think this does not affect knowledge sharing at all. If there is a need to ask questions, only a phone call is necessary.

To the Marketing department, outsider social relationship has a direct impact on their sales performance. The social relationship could help them to find the potential customers and could help them to do the work smoothly.

An employee from the Marketing department said:

*“Generally, we contacted our customers through recommendations from our friends and other social relationships. When we enter an enterprise, mostly managers will not talk to you and those who will talk to you do not have the power to make decisions. Moreover, the marketing situation is not advantageous to us: an enterprise has many choices when considering cooperation with a bank. So, competition always exists. Sometimes, even two branches of one bank are competing with each other although this is not permitted by the rules. Under this condition, the person who has the better relationship is more likely to get the business opportunity”.*

The most striking contrast between out-group and in-group knowledge sharing involves the Marketing department because of the competition between departments of different branches. So, knowledge about their business would be quite a sensitive issue and they will keep it to themselves instead of sharing. Two employees we interviewed from the Marketing department both admitted that although they cannot share knowledge outside their working group, equally both indicated that it does not affect their relationships with their competitors in other branches.

*“We could have the emotional communication and avoid talking about the business. Just show my concern for them is fine. We all understand the competition situation, so it does not affect the relationship.”*

*“Actually, we have many chances to meet other employees from the marketing department of other branches, such as meeting, training and so on. We are familiar with them and the relationship is fine.”*

#### **4.4 Others**

The bank where we conducted interviews has advanced internet and online communication systems. Every employee could read the latest news and get to know information related to their profession. There is also a system where they could post questions and get answers on a country-wide basis. All the employees we interviewed knew such systems exist and they could use them at their will. However, different employees tend to use these systems in different ways based on their working need.

There is a mandatory requirement from the top management to push employees to engage in knowledge sharing activities. The demand asks each department to submit a certain number of reports to online systems to describe their recent work and experiences they got from the work. Then the director of the department will assign the job to each employee. Individuals who do not submit enough reports online are punished. Most employees reflect that information obtained from the others' report is quite useful to their own work in terms of bringing them new knowledge and skills. However, not all the reports contribute in this good aspect. During the interview, we also found an interesting phenomenon about the way they use the corporate intranet to communicate with their supervisors. Employees from the marketing department indicated:

*"We could use intranet. One function is knowledge sharing, the other could make our director know our performance. Sometimes, if you do not tell, no one would know what you have done, so I will send a report to the intranet after the work is completed, this will inform the director."*

*"It is necessary to write down in the intranet what you have achieved to let the director know. Sometimes, drumbeating is very important and could enlarge the effect of the actual business you have done. Otherwise, the director of the branch would think you have finished nothing at all."*

## **5 DISCUSSION AND IMPLICATIONS**

Loss of knowledge power has been regarded as a critical barrier to knowledge sharing in prior research. However, in our case, we do not find that it has a significant impact. The only explanation is whether the power could be constituted if the knowledge is held. We could find easily from the answers that the employees will be engaged in many tasks and no added reward can be obtained if knowledge is hoarded by the individual. That is to say, knowledge hoarding causes more cost than benefit. In the bank where we conducted this case study, knowledge generally cannot enable the owner to hold more power. The only knowledge that can be transformed into power and that did prevent knowledge sharing lies in the Marketing department. Employees of the Marketing department do share knowledge exclusively with their power in-group because of the competitive nature of the interbranch environment and the lack of competition between Marketing department employees in the same branch. That is to say, if the competition disappears then knowledge power cannot be projected and this might facilitate interbranch knowledge sharing. Such a knowledge sharing behavior would be beneficial to the whole organization.

Contrary to our assumption, face is the least important issue when talking about knowledge sharing. This finding is consistent with previous research (Ardichvili et al., 2006), which suggested that face could come from several resources, such as wealth, ability, reputation, and so on. People are not afraid of showing their lack of knowledge since the sharing process could make them gain knowledge which is more important to their career than the loss of face. Moreover, face gaining is not necessarily bound to knowledge sharing. Instead, it is related to the quality and usefulness of knowledge. Only when the contributor has confidence in the value and novelty of his knowledge could he expect to gain face. This confidence also constitutes an antecedent of knowledge sharing behavior. If an employee is not confident enough, he is less likely to share knowledge assertively. Lack of confidence in the knowledge to be shared is regarded as a barrier (Husted and Michailova, 2002). However, we find that employees will not consider too much before sharing; on the contrary, they also think that sharing knowledge is a good opportunity to communicate with others to see if the knowledge is correct or not.

The topic of in/out group could not be discussed alone without loss of knowledge power. The most obvious in-group orientation is also found in Marketing department where knowledge could constitute a certain kind of power. Employees in Marketing department share their knowledge only with the colleagues in the same department from the same branch because the whole department has the same interest. Thus, we could find out that the boundary of the group is related to the existence of common goals and benefits. In addition, if there is nothing to do with the loss of knowledge power,

then employees are quite willing to share knowledge with employees in other department or other branches and relationship works importantly.

Relationships are important to the knowledge sharing of both in-groups and out-groups. All employees admitted that keeping in touch with employees from other banks is useful because they might offer new knowledge to them. Thus, no knowledge sharing differences exist between out-groups and in-groups if we divide the group by branch or department. However, the boundary can also be based on the quality of the relationship and the degree of mutual familiarity. In our case, we think that the relationship could explain knowledge sharing behaviors better than the in-group and out-group distinction. If we divided the group based on the boundary of departmental branch, the in-out distinction seems to disappear. If we divided the group based on whether the relationship is good or not, then in-group and out-group has the same meaning as the relationship, that is to say, employees might treat those who have the good relationship with them as the in-group members. Alternatively, we might treat a department as a group because of the in-group collectivism and extend this in-group boundary with individual relationships outside. From the Marketing department, we obviously find that with the knowledge power, people are inclined to share knowledge with peers who share the same interest.

We also find that Granovetter's (1973) conclusion that weak ties could facilitate knowledge sharing actually does not conflict with the subsequent research which shows that social nets will help to share knowledge. Knowledge sharing activities could be meaningful if two conditions are met. Firstly, the knowledge holder does have useful knowledge and secondly the knowledge holder has the intention to share. Unfamiliar persons could probably have the new knowledge and would be reluctant to share. However, familiar persons would likely share the knowledge voluntarily. In this way, if relationship can be established with those unfamiliar persons who have the new knowledge, then this may benefit future knowledge sharing.

We find that IT facilitates knowledge sharing and breaks the ties of time and space. Through the interesting way of communication between the subordinates and directors, we also learn that the vertical communication is insufficient, though this can be rectified through technology. However, information asymmetry still would exist between managers and employees in the branch. We also could not deny the possibility that employees will only report good news but not bad news, even though experiences obtained from failure is also precious.

We could conclude from the analysis that loss of knowledge power is the main barrier and relationship is a main promoter in the knowledge sharing behavior. People are likely to share their knowledge with the assumption that their personal or group interests are not damaged. In-group and out-group orientation could not be embodied unless knowledge power exists. Generally speaking, a good relationship could ensure the quality of the knowledge to be shared if there is no cause of loss of knowledge power.

Our research increases our understanding towards the barriers that affect knowledge sharing processes. First, we find out that the main barrier is loss of knowledge power and it could be eliminated through changes in systems. For example, since the power comes from competition between branches it can be made to disappear if each branch has its own territory. Once the competition disappears, it will be much easier to foster a cooperative environment where knowledge sharing can occur. Also, we indicate the relationship between loss of knowledge power, in/out group orientation and relationship. If there is no knowledge power to lose, then in/out group orientation will not differ; relationship is a kind of extension of in-group orientation.

Loss of knowledge power will not be a barrier if knowledge cannot be transformed into power. The only knowledge that could lead to power existed in a department where work is highly competitive - the Marketing department in this case. However, this kind of knowledge could be shared within the department because there is no internal competition. In this way, we find that some power could be eliminated through systems innovation. If the bank could assign each certain area as the target of each branch's marketing department, then competitive relationships may cease to exist between branches. This would then enable the branches to cooperate and so benefit the organisation as a whole, at the same time saving considerable resources caused by the meaningless competition.

Based on the importance of relationships and in-group orientation, communications between branches is necessary to enlarge the in-group boundary so as to facilitate knowledge sharing to happen. Another potential method is to exchange employees between the branches. The new employees for the branch could bring the new knowledge to the branch and would learn new knowledge from the branch too. This could also have the effect of enlarging in-group boundaries because the relationships maintained would be doubled.

## 6 CONCLUSIONS

The strongest barrier we found from the case is the loss of knowledge power. However, the negative impact from this barrier is not very serious. First, power from knowledge is hard to form in the bank. Employees will like to share their knowledge about business processes so as to reduce their work load. Second, when the power could be engendered from the knowledge, system adjustment could break this barrier and facilitate employees to cooperate and participate in knowledge sharing. Fear of losing face could not constitute a barrier to knowledge sharing. Face gaining is one of the antecedents of sharing knowledge with the critical precondition that a knowledge contributor has much confidence in the knowledge to be shared. In-group and out-group differences in sharing have not been found obviously in the case. Relationship orientation is a much stronger facilitator which overpowers the potential barrier of in-group and out-group differences. Employees from the bank will like to share their knowledge so as to build a good relationship with others and typically they do not care whether they are in the same branch or not. Thus, when they need help one day, they can turn to others for help, and they expect employees from other branches to bring them new knowledge in turn.

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## Appendix

1. If you need some knowledge during the work, which way will you prefer to get the knowledge?
2. What kind of knowledge could make you outstanding in the bank? Would you want to keep the knowledge?
3. During the knowledge sharing process, what kind of condition will make you feel that you gain face or lose face? Have you ever experienced that kind of situation?
4. What kinds of knowledge you will share with your colleagues in the same department, in the same branch, between the branches?
5. Is relationship important during knowledge sharing in the work? Why?
6. What reasons encourage/discourage you to share your knowledge with others?
7. Are there any differences between your attitude of knowledge sharing when you share with different people?
8. Will sharing knowledge take too much of your working time? How do you think about this problem?